PND22

COMPARISON OF MEDICATION ADHERENCE TO INTERFERON BETA-1B AND INTERFERON BETA-1A SUBCUTANEOUS IN MULTIPLE SCLEROSIS PATIENTS

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OBJECTIVES: To compare medication adherence to interferon beta (IFNβ)-1b and IFNβ-1a subcutaneous (SC) in patients with multiple sclerosis (MS). **METHODS:** This was a retrospective analysis of patients with a diagnosis of MS in a national managed care database that had ≥1 outpatient DMD claim during the 7/1/2002 to 12/31/2005 selection period. Eligible patients were continuously enrolled for 6 months before and 24 months after their initial drug claim (index date) and were between 18 and 65 years of age. Medication possession ratios (MPRs) were calculated as the percentage of ambulatory days during the 24-month post-index period from the date of first use of the index DMD. The primary analysis was logistic regression predicting likelihood of adherence (MPR ≥85%) by treatment group (IFNβ-1b versus IFNβ-1a SC), including covariates of age, sex, and region of the country. **RESULTS:** A total of 530 MS patients (IFNβ-1b, n = 206, IFNβ-1a SC, n = 324) met the study criteria. Patients had a mean age of 43.6 years, 77.2% were women, 49.0% were located in the Midwest, and 94.2% had commercial insurance. Average 2-year MPRs were 57.9% and 63.7% (P = 0.020) for IFNβ-1b and IFNβ-1a SC, respectively. The percentage of patients who were adherent (MPR ≥85%) was 39.3% for IFNβ-1b vs 49.4% for IFNβ-1a SC. A logistic regression using categorical MPR as the dependent variable found that IFNβ-1a SC patients were significantly more likely to be adherent than IFNβ-1b patients (OR = 1.603, P = 0.0110). Older age (in 10 year increments) was also a significant predictor of adherence (OR = 1.301, P = 0.0037). Sex and region of the country were not statistically significant. **CONCLUSIONS:** In this retrospective analysis, patients using IFNβ-1a SC were more likely to be adherent with their DMD therapy over a 2-year period than patients using IFNβ-1b, while controlling for age, sex, and region of the country.

PND23

PREVALENCE OF TREATMENT GAPS IN MULTIPLE SCLEROSIS PATIENTS RECEIVING DISEASE-MODIFYING DRUGS: FINDINGS FROM A NATIONAL MANAGED CARE DATABASE

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OBJECTIVES: Although gaps in therapy with disease-modifying drugs (DMDs) may result in suboptimal treatment for patients with multiple sclerosis (MS), maintaining continuous therapy is a challenge in MS care. This study evaluated gaps in DMD therapy in MS patients. **METHODS:** In this retrospective study, patients with a diagnosis of MS and ≥1 claim for a self-injectable DMD (index claim) between July 1, 2000–December 31, 2005 were identified using a national managed care database. Eligible patients (aged 18 to 65 years) were continuously enrolled for 6 months before and 24 months after the index date, and had no nursing home claims. The analysis excluded patients receiving natalizumab because most of the natalizumab claims did not contain the necessary days supply data. Maximum gap (MaxGap), which captures the maximum period of a given lapse in treatment per patient, was defined as the number of days between the lapsing of days supply of the prior prescription and fulfillment of a new prescription over the 24-month observation period. MaxGap was also assessed between the first and last claim during the observation period. **RESULTS:** A total of 3101 MS patients (76.5% women) met the inclusion criteria for the study. The mean ± standard deviation patient age was 44.0 ± 9.4 years, and most (51.0%) were from the Midwest. The results showed MaxGaps of ≥0 and <11 days in 20.5% of patients, ≥11 and <31 days in 24.5%, ≥31 and <61 days in 11.3%, ≥61 and <90 days in 6%, and ≥90 days in 37.7%. When examining the maximum gap between the first and last prescription claim, 36% of patients had a MaxGap of ≥31 days. **CONCLUSIONS:** Maintaining continuous DMD therapy remains a challenge for MS patients. Over 24 months, more than one third of patients had a gap in therapy of ≥90 days.

PND24

BURDEN OF MULTIPLE SCLEROSIS ON HEALTH-RELATED QUALITY OF LIFE: BASELINE FINDINGS FROM AN OBSERVATIONAL STUDY

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OBJECTIVES: To measure health-related quality of life (HRQoL) by SF-12 in multiple sclerosis (MS) patients and to compare the SF-12 component scores in MS patients with available US national average scores (norm). **METHODS:** ROBUST is an ongoing multi-center prospective US observational study among MS patients, involving a series of questionnaires completed via a web tool. A battery of items in the patient questionnaire is the SF-12 (Version 2). The ROBUST baseline SF-12 Physical Component Summary (PCS-12) and Mental Component Summary (MCS-12) scores were analyzed against US population norms. **RESULTS:** A total of 191 ROBUST participants completed baseline HRQoL assessments and were included in this analysis. The mean (SD) age was 40.6 (11.2) years and a majority were female (81.2%), white (86.9%), married (68.6%) and worked full- or part-time (61.2%). The MCS-12 showed a gradual increase with the level of education. Among the ROBUST population, the mean (SD) scores on PCS-12 [40.64 (11.18)] and MCS-12 [42.54 (11.44)] were significantly lower than the norm [PCS-12 norm: 49.63 ($p < 0.0001$); MCS-12 norm: 49.37 ($p < 0.0001$)]. The PCS-12 [40.11 (11.17)] and MCS-12 [42.42 (11.44)] scores for female MS patients and the PCS-12 [42.92 (11.08)] and MCS-12 [43.05 (11.55)] scores for male MS patients were also significantly lower than the respective norms [all $p < 0.0001$]. Similarly, SF-12 scores for MS patients by age groups [18–24 years; 25–34 years; 35–44 years; 45–54 years; 55–64 years] were significantly lower compared to norms for corresponding age groups [all $p < 0.001$]. Among these age groups within the ROBUST population: PCS-12 scores were lower after 40 years compared to that in younger age group, while MCS-12 scores do not show this same change with age. **CONCLUSIONS:** SF-12 component scores were significantly reduced in the ROBUST population compared to the available national average scores, suggesting a lowering of general HRQoL in MS population.

PND25

THE IMPACT OF LENNOX-GASTAUT SYNDROME (LGS) ON HEALTH RELATED QUALITY OF LIFE – A CONCEPTUAL MODEL

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OBJECTIVES: The onset of LGS during early childhood brings particular concerns for the child with LGS and for the parents caring for the child with the condition. LGS is a severe form of childhood epilepsy which is characterized by multiple seizures and mental deficiency. This study was conducted to explore the impact of LGS on the HRQL of the parent and the child and to develop a conceptual model. **METHODS:** Semi-structured interviews were conducted with 40 parents of children with LGS in the US, UK, and Italy. Given the fact that it was not possible to interview the children, parents were asked to provide a report on their perceptions of the HRQL of their child in addition to describing the impact on their own HRQL. Thematic analysis using Atlas TI was conducted to develop themes relating to the impact on HRQL. The themes were organized into a conceptual model of the impact of LGS on the HRQL of the parent and the child. **RESULTS:** Parents reported extensive difficulties in every aspect of their own lives. Major themes included burden of care on work and social activities, stigma, frustration, anxiety and other physical issues (including sleep disturbance), as well as concerns about the future for their child. With respect to the HRQL of the child, the parents reported that the physical functioning of the child is affected, particularly in relation to mobility difficulties. LGS has a significant affect on a child's cognitive skills with some of the children not being able to talk. In addition, children with LGS tend to have little or no social skills and find interacting with others difficult. **CONCLUSIONS:** LGS has a substantial negative effect on the HRQL of parents of a child with LGS as well as on the HRQL of the child him/herself.

PND26

UTILITIES FOR MODERATE ALZHEIMER'S DISEASE: RESULTS FROM A SURVEY OF THE GENERAL PUBLIC IN CANADA

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OBJECTIVES: (1) To elicit health utility scores for moderate Alzheimer's disease (AD) using the Canadian general public; (2) to compare utility scores for Canadians' self-assessed health status with utility scores for health status defined as moderate AD; (3) to measure awareness of AD; and (4) to determine factors that influence utility scores. **METHODS:** Five-hundred Canadians were chosen randomly to participate in a 13-minute telephone interview. The sample was national in scope and stratified by income. The EQ-5D was administered to measure utility for respondents' current health status (i.e., no AD). After describing moderate AD, respondents were asked to answer the EQ-5D again, this time imagining they had moderate AD. AD awareness was measured with the Alzheimer's Disease Knowledge Test (ADKT). Respondents were also asked about socio-demographics and whether they knew someone with AD. OLS regressions were conducted to identify determinants of EQ-5D utility scores. **RESULTS:** The mean age of respondents was 51 years, 61% were female, and 42% knew someone with AD (e.g., family member). Mean ADKT score was 3.4 (SD: 1.1) out of 5 (higher scores indicate better knowledge of AD). Respondents' mean EQ-5D score for their current health status was 0.857 (SD: 0.15). Mean EQ-5D score for a hypothetical, moderate AD health status was 0.638 (SD: .20), a utility decrement of 0.22. For the VAS component of the EQ-5D, scores were higher for the current health status (79.16 versus 57.66). Age and income were significant explanatory variables for current health status utilities, but only age was significant in the determination of the utility score under the assumption of moderate AD. Gender, knowledge of someone with AD, or AD awareness scores had no impact. **CONCLUSIONS:** When measured by the EQ-5D, Canadians would expect to assign a lower utility to their health status when they have moderate AD.

PND27

THE IMPACT OF DIFFERENT STAGES OF MULTIPLE SCLEROSIS ON HEALTH UTILITIES: A SYSTEMATIC REVIEW OF THE LITERATURE

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OBJECTIVES: Multiple Sclerosis (MS) causes neurological disability of varying severity. Disability in MS is measured by the Kurtzke Expanded Disability Status Scale (EDSS), a clinician-based neurological impairment rating scale (scale from 1 to